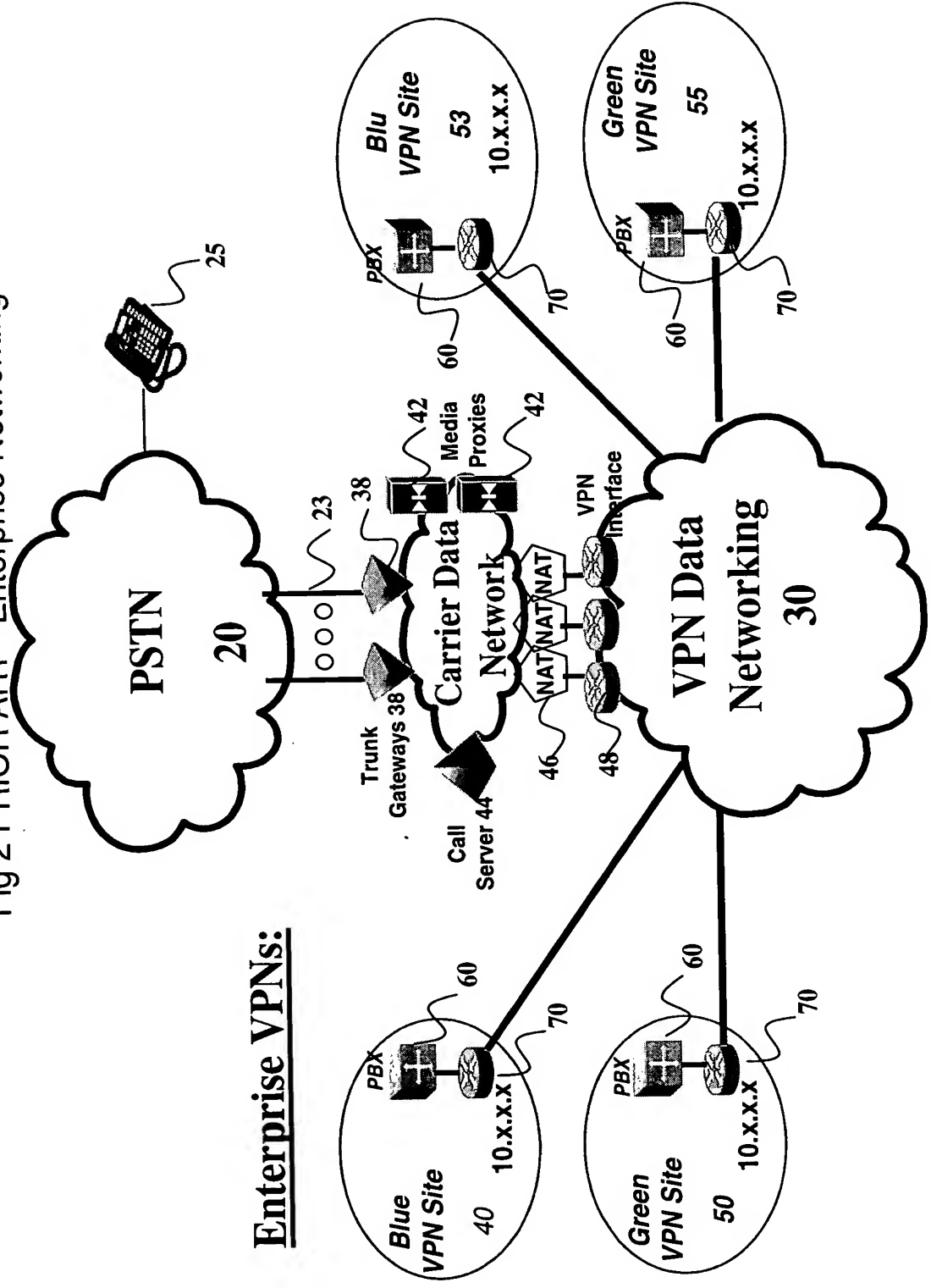


Fig 1 PRIOR ART VPN PSTN Access

Fig 2 PRIOR ART Enterprise Networking:



### Enterprise VPNs:

The diagram illustrates a VPN converter architecture. At the top, a cloud labeled 'PSTN 20' is connected to a telephone icon '25'. Below it, a cloud labeled 'Carrier Data Network 27' contains a 'Call Server 44' and an 'Other Common Network Resource 26'. This network is connected to a 'VPN Converter 100' which contains two 'NAT' components. The converter is connected to a large cloud labeled 'VPN Data Networking 30'. This central cloud is connected to four separate VPN sites, each in its own cloud: 'Blue VPN Site 40', 'Green VPN Site 50', 'Blue VPN Site 53', and 'Green VPN Site 55'. Each site contains a 'PBX' and a router. The sites are connected to the central cloud via lines labeled '70'. The central cloud also contains a 'VPN Gateway 110' and is connected to the 'VPN Converter 100' via a dashed line labeled '110'. The entire system is labeled 'Enterprise VPNs:' at the bottom.

## Enterprise VPNs:

Fig 4 Line GW to VPN converter – Dedicated per VPN  
VPN converter 100

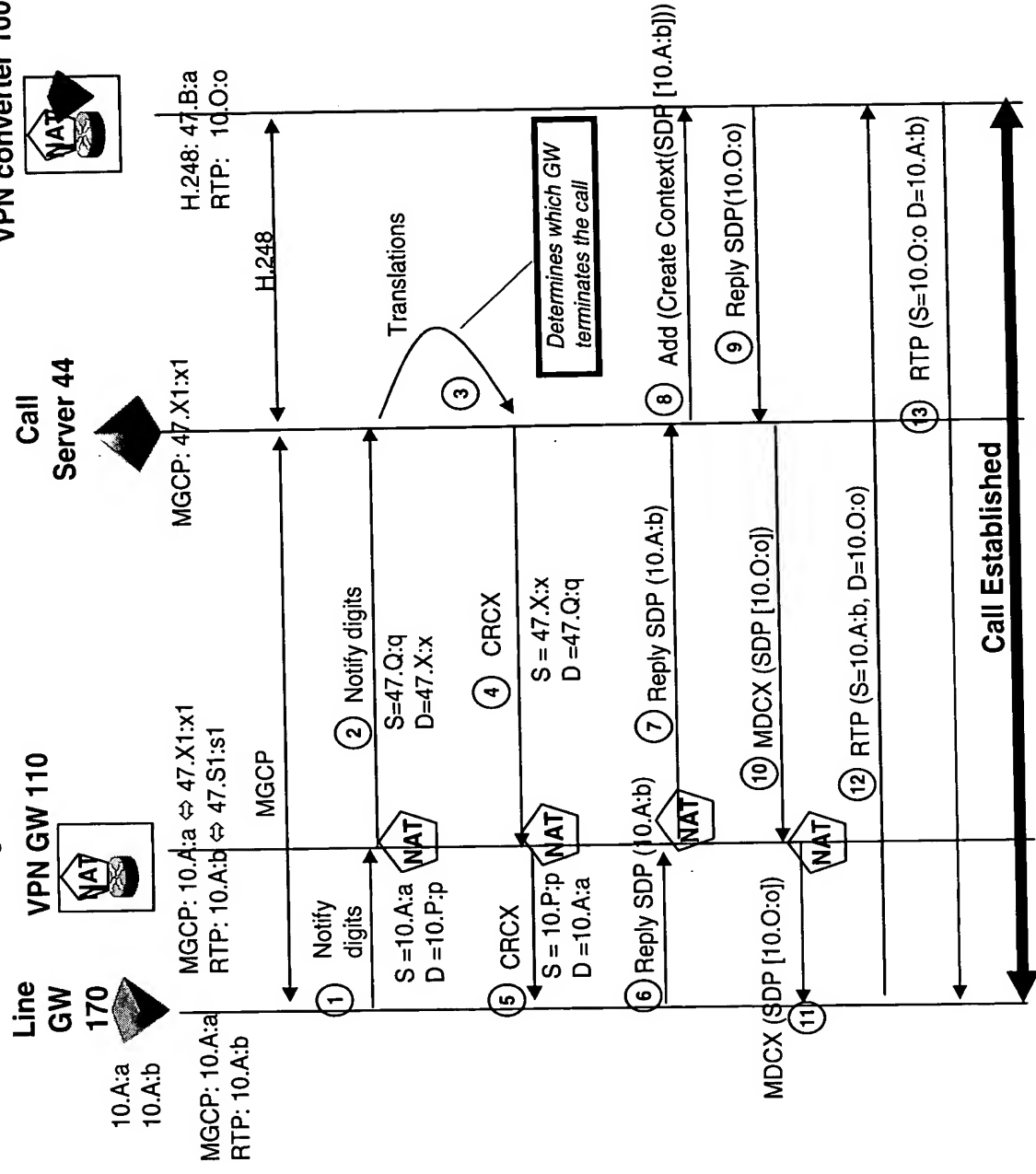
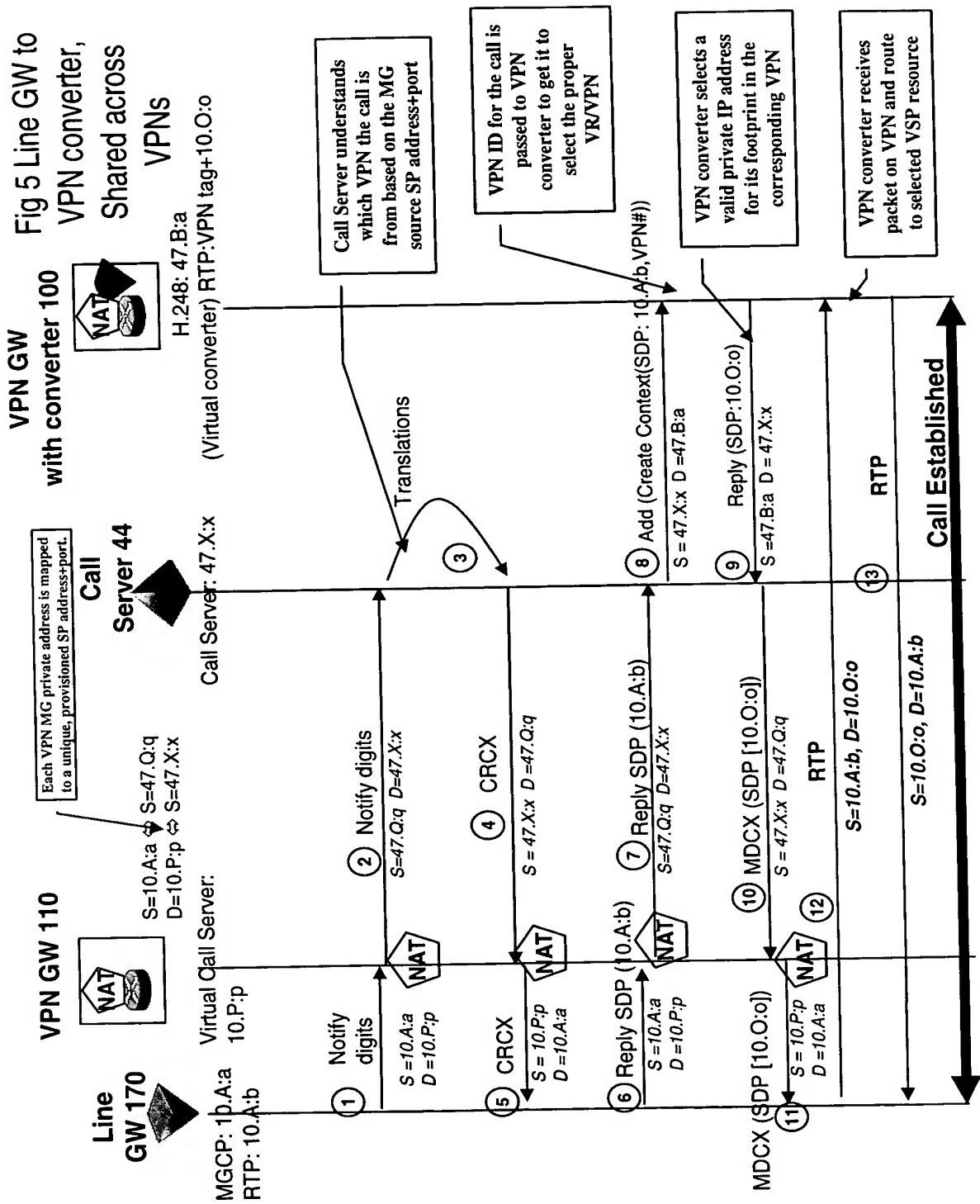


Fig 5 Line GW to  
VPN converter,  
VPN converter,  
Shared across  
VPNs



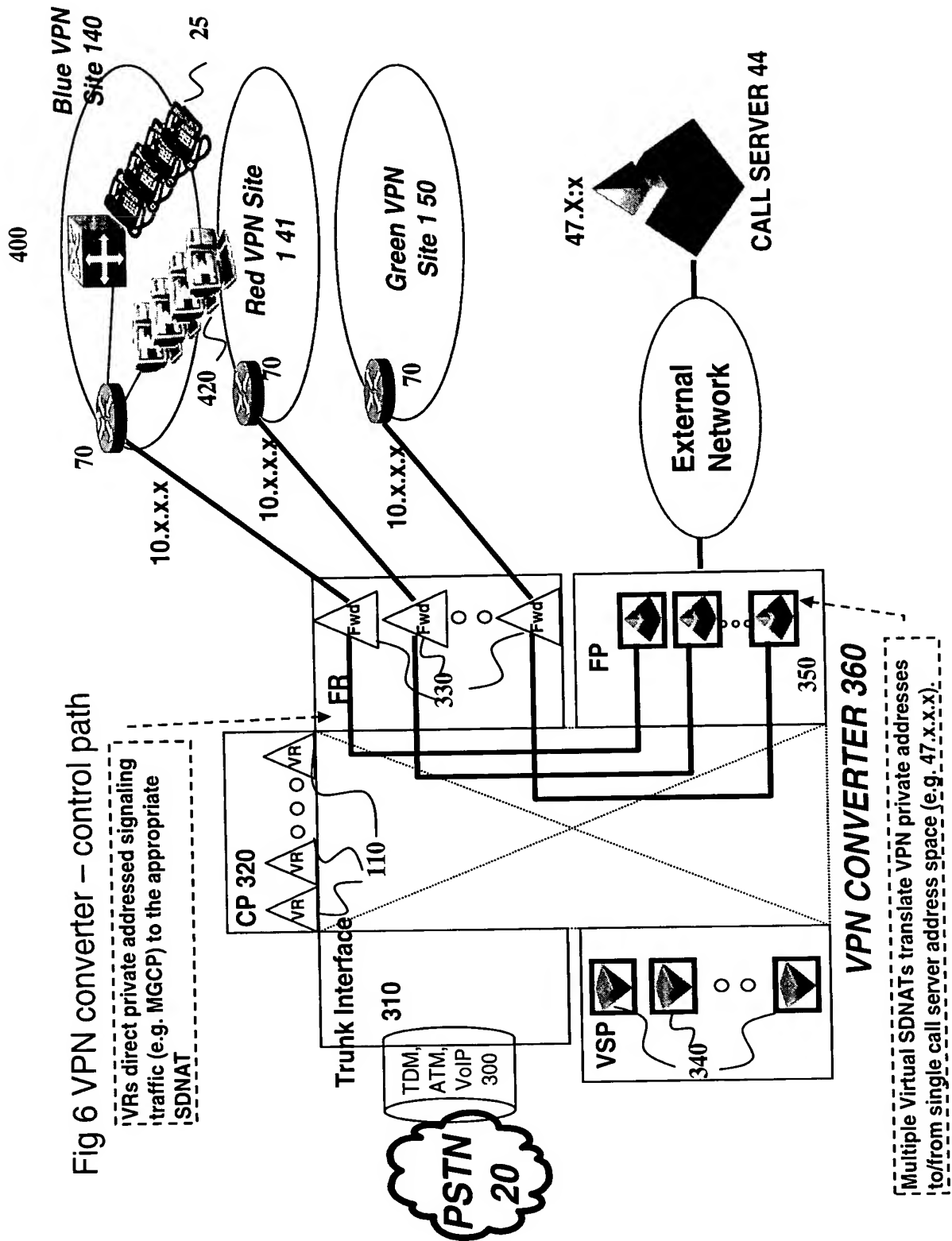


Fig 6 VPN converter – control path

Fig. 7 is a VPN converter diagram.

VRs direct private addressed bearer traffic (e.g. RTP) to the appropriate VSP resource.

VSPs map the appropriate private 10.x.x.x VPN addresses with TDM time slots (i.e. a VSP must associate a VPN with a specific backplane bearer path (e.g. ATM VC)).

CP 320

VR

VR

VR

Trunk Interface

FP 350

Fwd

Fwd

Fwd

Blue VPN Site 1 400

Red VPN Site 1 41

Green VPN Site 1 50

70

70

70

10.x.x.x

10.x.x.x

10.x.x.x

40

420

50

External Network

47.X:x

CALL SERVER 44

PSTN 20

310

TDM

ATM

VoIP

300

VSP 10.x.x.x

VSP 10.x.x.x

340

VSP 10.x.x.x

